The Complete Book on Printing Technology

Author: NIIR Board
Format: Paperback
ISBN: 8178330520
Code: NI111
Pages: 742
Price: Rs. 1,100.00 US$ 125.00
Publisher: Asia Pacific Business Press Inc.
Usually ships within 3 days

Printing Industry generates a wide range of products which require in every step of our everyday life. Starting from newspapers, magazines, books, post cards to memo pads and business order forms each are the products of printing industry. Printing is a process for reproducing text and image, typically with ink on paper using a printing press. There are various types of printing process for example offset printing, modern printing, gravure printing, flexographic printing etc. Offset printing is a widely used printing technique where the inked image is transferred from a plate to a rubber blanket, then to the printing surface. When used in combination with the lithographic process, the offset technique employs a flat image carrier on which the image to be printed obtains ink from ink rollers, while the non printing area attracts a film of water, keeping the non printing areas ink free. Gravure printing is a printing technique, where the image to be printed is made up of small depressions in the surface of the printing plate. It is divided into three broad product areas; packaging printing, publication printing and speciality printing. Printing technology is often carried out as a large scale industrial process, and is an essential part of publishing and transaction printing. This is the age of hi fi, jets and computers. Rapid advancements in science and technology have made their impact on the printing industry of the world too. The old techniques of printing have become obsolete and made way for the new technology. The printing industry is just one example of an entire industry movement that is changing while keeping up with the development of new technologies. The proliferation of emerging technologies has dictated a rebirth of the printing industry. The Indian Printing Industry is well established and presently growing at 12% per annum.

This book majorly deals with typographic technology, photo scanning systems, sequence of steps in the printing processes, size and scope of the printing industry, high volume printing technologies for the production of polymer electronic structures, inking system, film high contrast printing, principle of planographic printing, modern printing process, ink jet etc.

The book contains the latest printing processes like web, gravure, flexo, security and offset printing. This book is an invaluable resource for new entrants, technicians, craftsmen and executives working with printing industries.

Contents

1. The Beginning of Printing
   Typographic Technology
   Hand composition
   Linotype
   Monotype
   Ludlow
   Photo-scanning systems
Adjustment of cylinders
Delivery mechanism
Qualities of a good delivery system
Attachments on the delivery part (board)
Miscellaneous operations
6. Printing Processing
Printing Exposing
7. Film High contrast Printing
Tonal Deletion
Tone Line
Making the Separations
Printing Separations
Bas Relief
Colour Manipulations
Sandwiching
Standard Negatives
Data Sheets
Evaluating Contact Sheets
Evaluating for Colour Filtration
Fine Colour Printing
Controlling Colour Materials
The New High-Speed Film
Colour Transparency Films
Printing, Colour Positives
Test Prints
Processing Ektachrome 14 Paper
Processing Cibachrome A-11
8. Origin of Plangraphy
Principle of Planographic Printing
Direct printing process
Materials, Tools and Equipments
Dampening cloth
Vaseline
9. Offset Press
Dampening Solutions
Feeding & Registering system
The delivery system
Mabeg feeder
Sheet Detection
Press Make ready, and Operation
Feedboard setting
Setting the sheet path
Fitting the plate
Ink preparation
Multicolour printing
The multicolour press
The Perfector Press
Infra-Red Drying on Web-Offset
Offset printing Machines
Business Form Production
10. Paper Technology
The History of Paper
From plant to paper:
Europe's first paper mill
America's first paper mill
Paper Specification
Paper faults During Printing
Make Ready Procedure
Types of Paper
Paper Requirements For Offset Printing
Testing the properties which effect print quality
Types of Papers
Beating and Hydration
Requirements for Printability of Paper
Printing & Paper Troubles & How to Overcome
The Indian Paper Industry
International Paper Sizes
Paper Calculation
Estimate Paper Need
11. Modern Printing Process
Ink Zet
Film Plotting Machine
Computer to Plate Technology (CTP)
Computer To Plate
Scanners
Digital Colour Presses & Computer to Press
Making digital plate production cheaper
The Digital Offset Colour Revolution : E-Print 1000
Market forces
Quality & Productivity
Anilox Offset
More Economical For Frequent Partial
Editions with high Colour Content
Waterless Anilox Offset
Produce a complete newspaper by computer software
12. Pad Printing Application
13. Gravure Printing
The Gravure Industry
Basic Gravure Concepts
Cylinder Construction and Preparation
Copper Plating and Polishing
Gravure Presswork
Cylinder and Doctor Blade Considerations
Impression Rollers
Trends in Gravure
14. Web Offset Machines
Design of web machines
Reel stand unit
Main parts of printing unit
Sequence of colours in printing
Quality Control in Printing
Dampening solution
15. The Flexographic Printing
16. Security Printing

Credit cards
Caliper and dimensions
Hologram
Numbering with Micr Ink on Rotary Presses
17. Bar Coding
Type of Bar Code and Description
Continuous Codes
Letter Press
Glossary-Bar Code Terminology
Some Major Bar Codes
18. Offset Printing Machines

About NIIR

NIIR PROJECT CONSULTANCY SERVICES (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.


NPCS also publishes varies process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.